What is claimed is:

1. In a communication system, a method for media access control feedback over a packet channel divided in channel time slots comprising the steps of:

dividing the channel time slots into sub-channel time slots;

defining a packet channel feedback field associated with each sub-channel time slot; and

indicating acknowledgments using the packet channel feedback field.

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2. The method as recited in claim 1 comprising the step of:

assigning an active mobile identity associated with an active mobile station, and wherein the step of indicating acknowledgments comprises the step of:

including the active mobile identity in the packet channel feedback field.

3. The method as recited in claim 2 wherein the assigned active mobile identity is used to identify an active mobile station to receive packet data signals.

4. The method as recited in claim 2 comprising the step of:

invalidating the active mobile identity after one transaction of packet data signals.

5. The method as recited in claim 2 wherein the step of assigning an active mobile identity comprises the step of:

assigning the active mobile identity during a transaction initiation procedure in the system.

6. The method as recited in claim 2 wherein the step of assigning comprises the step of:

assigning a plurality of active mobile identities and ones of the active mobile ~~identity are reserved for special functions.~~

7. The method as recited in claim 2 wherein the step of assigning comprises the steps of:

assigning a plurality of active mobile identities; and

assigning a subset of the active mobile identities as mobile station identifiers.

8. The method as recited in claim 2 wherein the assigned active mobile identity is used to indicate a time slot assignment for the active mobile station.

9. The method as recited in claim 8 comprising the step of:

transmitting packet data signals on an uplink over the packet channel based on the time slot assignments.

10. The method as recited in claim 8 wherein the step of transmitting comprises the steps of:

forming a sub-channel feedback field in the packet channel feedback field to indicate acknowledgments; and

forming a sub-channel assignment field in the packet channel feedback field to indicate time slot assignments, the sub-channel assignment field being substantially independent of the sub-channel feedback field.

11. The method as recited in claim 10 wherein a format of the sub-channel feedback field depends on whether it is in response to a contention access or a reserved access.

12. The method as recited in claim 10 wherein the sub-channel feedback field comprises an active mobile identity that indicates acknowledgment in response to a contention access.

13. The method as recited in claim 10 wherein the step of assigning comprises the steps of:

assigning a plurality of active mobile identities; and

reserving a set of the active mobile identities for special functions.

14. The method as recited in claim 10 wherein the step of assigning comprises the steps of:

assigning a plurality of active mobile identities; and

using a subset of values for the active mobile identities as mobile station identifiers.

15. The method as recited in claim 10 wherein the sub-channel feedback field contains flags indicating acknowledgment and continued reservation on the sub-channel.

16. The method as recited in claim 10 wherein the step of forming a sub-channel feedback field comprises the step of:

setting the sub-channel feedback field to a special active mobile identity value to indicate a negative acknowledgment.

17. The method as recited in claim 16 wherein the step of forming a sub-channel assignment field comprises the step of:

setting the sub-channel assignment field to a special active mobile identity value to indicate contention.

18. The method as recited in claim 10 wherein the step of forming a sub-channel assignment field comprises the step of:

setting the sub-channel assignment field to an active mobile identity value to indicate time slot assignment.

19. The method as recited in claim 1 wherein the system comprises a mobile station and a base station, and wherein the method comprises the steps of:

transmitting from the mobile station a request to initiate packet data transmissions to the base station based on the packet channel feedback field;

including a suggested active mobile identity value in the request; and

awaiting an acknowledgment from the base station in the packet channel feedback field.

20. The method as recited in claim 19 wherein an acknowledgment in the packet channel feedback field indicates acceptance of the suggested active mobile identity.

21. The method as recited in claim 19 comprising the step of:

if a negative acknowledgment is received in the packet channel feedback field, waiting a time period before the mobile station makes another request.

22. The method as recited in claim 19 wherein the step of waiting a time period comprises the step of:

waiting for an active mobile identity assignment to the mobile station to be received from the base station.

23. A method for transmitting packet data signals in a time slotted packet channel comprising the steps of:

creating sub-channel time slots associated with the time slotted packet channel;

defining an active mobile identity associated with an active mobile station; and

identifying acknowledgments using the active mobile identity.

24. The method as recited in claim 23 further comprising the step of:

identifying assignments of sub-channel time slots based on the active mobile identity.

25. The method as recited in claim 24 wherein the step of defining comprises the step of:

invalidating the active mobile identity after one transaction of packet data signals.

26. A communication device for communicating via packet data signals over a packet channel comprising:

a sub-channel controller for identifying acknowledgments and assignments of time slots on the packet channel based on a packet channel feedback field; and

a channel access manager for controlling access to the packet channel based on the acknowledgments and assignments.

27. The communication device as recited in claim 26 wherein the sub-channel controller identifies acknowledgments based on the packet channel feedback field and a active mobile identity associated with the communication device.

28. The communication device as recited in claim 27 wherein the device is a mobile station.